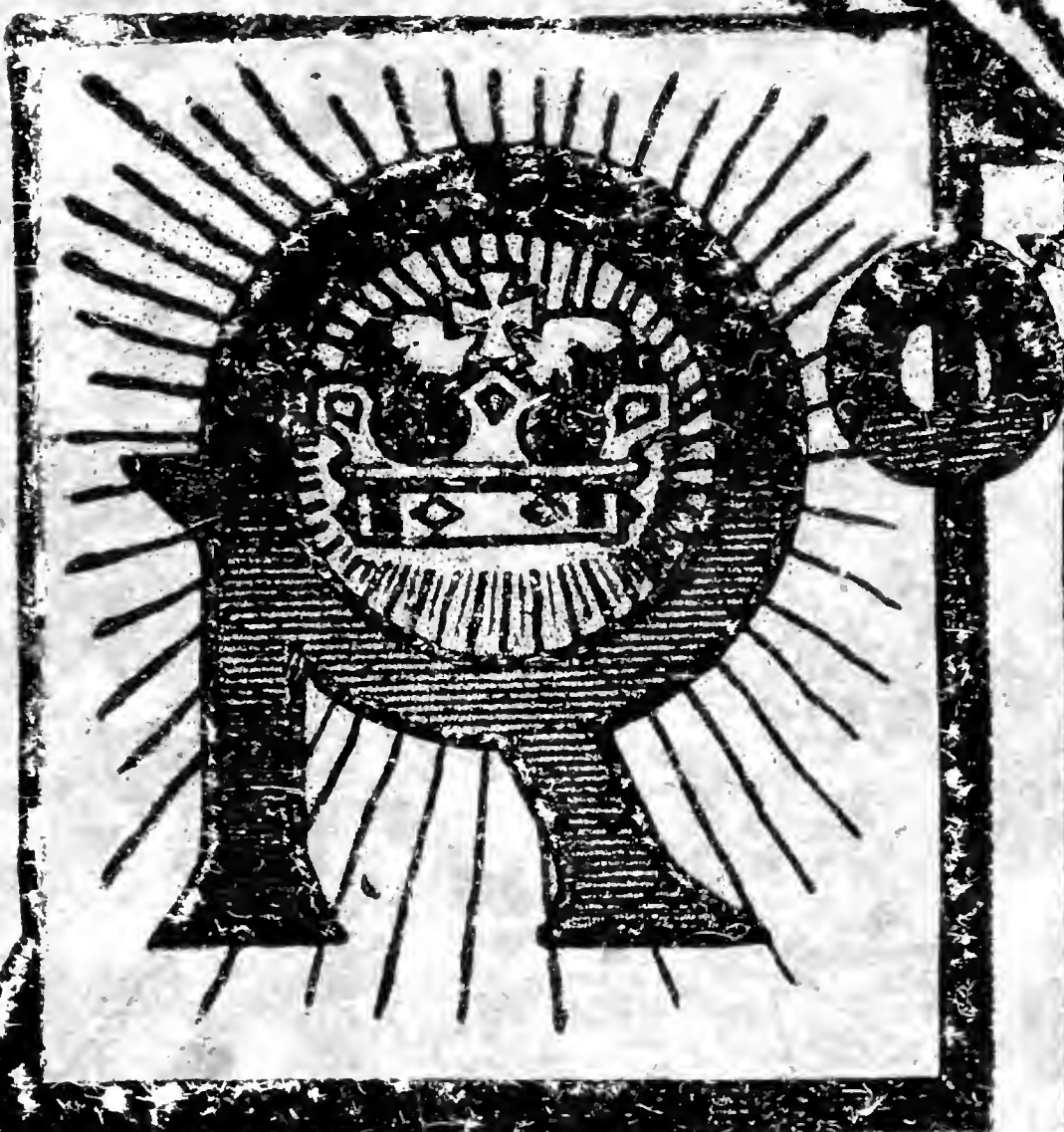


Dec 27, 1893—

1894

I.



# NOTE BOOK

*E. W. Nelson*



No 69

TRADE MARK



2<sup>d</sup> Trip.

Vol. I

Mexico

Dec. 27, 1893 to  
1894

E. W. Nelson

— 1893. —

City of Mexico - Dec. 27.

I reached here at 10.30 ~~h~~  
a.m. today from Washington  
via Chicago, & Laredo.

~~From~~ The vicinity of Laredo is  
<sup>sandy & dry</sup>  
a desert lying in the lower Sonoran  
zone. Leaving there at dark I saw  
none of the interesting region  
until day broke the next a.m.  
when we were on the table-land just  
north east of Saltillo. This place  
is on a dry treeless plain within  
the lower Sonoran zone, but about  
at its upper border. Just  
south of Saltillo, at Carneros,  
the R.R. passes between some

hills which afford one  
a chance at the upper sono-  
ran while the plains of the  
village are ~~on~~ treeless ~~plains~~<sup>hills</sup>.  
lower sonoran. South of  
Carnero the road passes  
through the hills & descends  
on another broad open  
plain (trees & with much  
Larrea mex.). Mts. lying  
to the E. & W. in low barren  
ranges like those about  
City of <sup>San Luis</sup> Potosi. Just  
N. of Vanegas, (<sup>San Luis</sup> Potosi) on west  
side of R.R. is <sup>one of</sup> the largest prairie  
dog villages I have seen. It  
must be nearly 3 miles across

and contains an enormous  
number of holes. The day I  
passed was cool & "no dogs" were  
seen. Near Chareas, on  
this line, the harrhea <sup>disapp</sup> disappears  
and many large Opuntias, the  
Yuccas & <sup>Schinus</sup> Schinus molle ~~do~~  
~~come in~~ <sup>in the</sup> country shows  
evidence of having a much greater  
rainfall thence south ~~the~~ than  
on the desert plains northward.  
(There was surprisingly little  
bustle about the station at S. L. P. Obi-  
as compared with the year before -  
The hard times ~~was~~ <sup>are</sup> also shown  
in the quietness about the R.R. stations  
in the City of Mexico.)



41 The day I arrived in the City of M.  
I started for the P. O. & near there encountered  
Prof. Hermann of the Nat. Mus. with Prof. Edwards  
& Halstead of the Univ. of Tex. & the Baron  
Brackebach-Welda - a german  
decayed nobleman long resident here,  
well known & well informed in all matters  
of local interest. He once taught french  
& German here but now lives on the  
strength of his social abilities & relations  
in Germany - according to local accounts.  
One of those drifting pieces of old  
world wreckage we get in America at times.  
A man of pleasant address & a large amount  
of miscellaneous information a great  
talker & valiant truthsayer with a gleam  
of good spirits - at the host's expense.

On the 30<sup>th</sup> Dec. my assistant,  
Goldman, came in from Chihuahua  
where he has been during my 3 mos.  
trip to the U.S. He was in the city  
of Chihuahua during Nov. & early  
December, while the recent out-  
break of revolutionists was going on there.  
He knew of one American who was  
stopped & his rifle & horse taken although  
he was allowed to keep his pistol &  
other belongings. Goldman says  
that soon after the revs. began  
that one eve. the military band was  
playing in the main plaza of the city  
& the usual & considerable number of  
common workmen & loafers gathered  
to listen to it. Suddenly a squad of police-  
men with another squad of soldiers

One night in City of Chik. Goldman had to stand off 2 men with a pistol in streets of the town. He found that there is a strong antagonism existing in Chik. against Brit. Amer. & nations. There are many Amer's there who have left the states under pressure & the entire community on both sides native & foreign is a hard one taken as an average —

Surrounded the plaza, the most of the men found there were arrested & herded away to the Casaral where they were forced to enlist. Soon after this the troops were sent out & had a severe skirmish with the guerrillas. As a result of this, Goldman tells me, a large wagon load of knapsacks & soldiers clothing both shot. torn & bloody was brought up from the R.R. station to the town. From this it would appear that the dead must have been stripped by their own comrades. The trouble occurred near the town of Palomas. People had very little to say but it was generally understood & talked that it was not prudent to have much to say & whenever it was discussed by natives & many americans it was in a subdued way. It is stated in the city here that the press of the "Democrata", confiscated last spring for its opposition to the Govt, has been given to one of the local the Orphan Asylum.

The last days of Dec. this  
year have been raw & cloudy  
with showers in the valley of M.  
Clouds hang heavily over the volcanoes.  
Accounts are published in local  
papers saying that people living  
south of Pap. in Morlos & Puebla  
have recently seen considerable smoke  
& flashes of light about summit of the vol.  
Records at the Smithsonian Institution  
show that there  
have been no eruptions of Pap. Dec.

January 1, 1892. Clear. No  
eruptions reported from Pap.  
or from any other volcano.



about 2000 in the P.O. and  
others being made of small  
newspapers & etc. - the store  
was closed & the town had a  
general holiday look. Many  
the same people were found  
about the place. Looking at the  
scenery from the camp in the distance  
rather better than most of the previous  
days. The road was not very good  
- mostly rough with  
the usual muddiness of mud & sludge.

<sup>4</sup> During the day, I got down  
to the point where the road was  
impossible to get my baggage from the  
point. It was a day longer  
than the first.

City, May, Jan 2, 18--  
An application at first for  
belonging to the same person  
by my assistant I learned that the  
things had been taken to the house.  
My first intention was to <sup>run</sup> in  
such a fashion that it occupied  
the whole of the morning to get an outfit  
though this was somewhat tedious  
the 1st. Finally having decided to return  
the same day to get away, today  
I was an American.

They got off that morning  
and came out to this place  
as a trip up to the top of the  
glacier. ~~The same day.~~

The day in the valley was still at





Leaves (perhaps) *Cypripedium*  
(*Asclepias*?) *prostratus*. The only plant  
*Delphinium* (like) - 15. *Delphinium*  
Probably in flower. Very pale  
white. Very pale in the southern  
+ in the valley from 7400 to  
7500 ft. *Delphinium* to some  
175 ft. of *Delphinium* gets out  
the same. *Delphinium* is not  
in flower. *Prosopis* occurs in  
the valley. *Prosopis* is statement  
of its occurrence in. *Amelanchier*  
must have been coming to the valley  
from the higher trees.

The valley of the *Delphinium* is very  
about as I saw them last year  
+ to some extent of the *Delphinium* slope



of Eglar. show that in addition  
to the glacier shown by the last  
survey there is still another one  
lying on the SW. Slope which  
descends from between the other  
two first in a S. E. direction  
course then changing to a more  
westerly one. Like those first  
noted, it has now retreated from  
its old limits so as to leave  
an old relief to the lateral  
moraine <sup>front</sup> ~~glacier~~ <sup>glacier</sup> ~~glacier~~  
Like the lateral moraine of the  
glacier, this has a SW course  
and at the same altitude on  
the outside just below the  
river. This last glacier is small

and may be added that  
the male while near the  
nest (about 100 yds. to 150 yds. to the  
nest) has ~~the~~ the following  
bird smaller than the  
female, and is from 100 yds.  
at winter in season.

From this it becomes evident  
that the description of the nest is  
typical of the interior of the  
the white lady is wholly due to  
ice action. The extreme summit  
of the nest is a slightly rounded  
table from which the ice once  
melted down on all sides  
to a depth of 1100 or 1200 ft.

Through its neighbors through the



softest parts of the summit  
thru glacier basins, of  
small extent were produced  
as well as numerous small  
ravens lying somewhat lower  
down, including the largest  
fall at the base of the mt just at  
the bottom. After considerable  
study of the surface indications I  
cannot find any evidence to  
show that these glaciers ever  
descended below 10500 ft. on  
the S.W. slope of Egt. ~~They~~

~~at~~ Fat. Objec. <sup>cross</sup> on the  
summit of the ~~peak~~, ~~without~~  
easterly side being ridge of  
evidence. This object the time

of the greatest glacial develop-  
ment was also covered by small  
thin glacial ice much less  
heavy than those of the north  
since the summit of this ridge  
is seen, the lower border of the  
glaciers. Enough were present  
to cut out the hills & mount-  
ains to be seen while the  
detrital mud flowed down & joined  
with that of the valley of  
Cannon or built up the series  
of foothills which are between  
5500 + 9500 ft along the NW  
side, slope of this ridge.  
Since the detrital foothills also  
flank the SW base of the ridge at the



same altitude but are much  
larger. They form rounded  
dosses along the base of the  
mtn with occasional spurs  
& cliffs of limestone or trachyte  
showing along the crevices  
cut through by the water.  
There is no sign of glacial  
action of any kind on the  
sides or tops above the  
level of the ridge on which  
it is situated. It is evident  
that this peak has been built  
up over the summit of  
the ridge since the time  
of the last ice. The  
The

Upon the snow covered side  
no signs of snow  
water on the north  
side. No signs of snow.

~~The day that~~ <sup>11</sup> The Summit  
of Pop. is very steep on  
the E., S., & W. sides & is nearly  
if not quite insurmountable  
there. On the N.E. side is the  
least steep & for this I noted  
a reason when making my  
descent. ~~At the summit of the~~

In early morning the snow on the  
the slope of the mountain <sup>just</sup> for the  
snow was soon melted. At  
midday the snow was melted a



At the & the water from lower border  
gradually trickled down slowly until  
a large amount of the same  
surface water gradually became  
significant. It would then start  
suddenly down the slope with a  
considerable hissing noise from  
the grinding together of the small  
rough fragments of lava.  
Sometimes these miniature  
avalanches would run only a  
few feet but many of  
them ran down from 500  
feet and carried great  
quantities of the loose material  
down the slope until the  
evening of the winter. During the

up by the ground on which  
it past the mud finally  
came to a stop as well as  
a broad fan-shaped  
bed some inches thick.  
~~When first deposited~~  
In a short time the frozen ground  
below caused the overlying mass  
to freeze solid, & as a result  
deposited matter on top of  
as old material became  
a mass of ice rising to the  
surface. This goes on day after  
day until a ridge is built up  
into a mountain the top of which  
reaches to the bottom of the ice  
in the water. In this

May is stored an enormous  
mass of accumulated  
water about the base of the  
snow covered cone. The  
water from above being  
transferred lower down held  
by the ice. Should a new  
eruption occur, no sudden  
increase heat occur on the  
side, of the cone that ice  
would be melted & an  
enormous mass of liquid  
and be turned loose.  
At present this built up  
above efforts to reach  
and to the summit,





Back of the crest forming a rich background  
 of the dark purple ~~background~~ <sup>background</sup> ~~background~~  
 deepening into night until the snowy crest  
 seemed almost like frothy snow.  
 Then the ~~sharp~~ <sup>sharp</sup> ~~with~~ <sup>with</sup> ~~horns~~ <sup>horns</sup> ~~shadows of~~  
 might creep up from the pine crests  
 at the base of which the shadows of the  
 rising stars ~~the stars~~ <sup>the stars</sup> ~~in~~ <sup>in</sup> ~~dark~~  
 sharp ~~the~~ <sup>the</sup> ~~points of~~ <sup>points of</sup> ~~light~~  
 the head of the ~~stars~~ <sup>stars</sup> ~~like a dark~~ <sup>like a dark</sup> ~~mountain~~  
 both ~~heads~~ <sup>heads</sup> ~~like~~ <sup>like</sup> ~~dark~~ <sup>dark</sup> ~~mountain~~ <sup>mountain</sup> ~~being~~ <sup>being</sup> ~~seen~~  
 in the ~~same~~ <sup>same</sup> ~~giving~~ <sup>giving</sup> ~~an~~ <sup>an</sup> ~~impression~~ <sup>impression</sup> ~~which~~ <sup>which</sup>  
 the breast

✓

up ~~up~~ <sup>up</sup> ~~the~~ <sup>the</sup> ~~stars~~ <sup>stars</sup> ~~and~~  
 the ~~night~~ <sup>night</sup> ~~in~~ <sup>in</sup> ~~the~~ <sup>the</sup> ~~mountain~~ <sup>mountain</sup>  
 which ~~had~~ <sup>had</sup> ~~to~~ <sup>to</sup> ~~purple~~ <sup>purple</sup> ~~and~~ <sup>and</sup> ~~the~~ <sup>the</sup>  
 shadow had become a ~~dark~~ <sup>dark</sup> ~~blue~~ <sup>blue</sup>  
 we tinted ~~coming~~ <sup>coming</sup> ~~of~~ <sup>of</sup> ~~expanding~~ <sup>expanding</sup>  
 branches ~~then~~ <sup>then</sup> ~~the~~ <sup>the</sup> ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup>  
 suddenly ~~which~~ <sup>which</sup> ~~the~~ <sup>the</sup> ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup>  
~~reverted~~ <sup>reverted</sup> ~~to~~ <sup>to</sup> ~~the~~ <sup>the</sup> ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup>  
 last ~~coming~~ <sup>coming</sup> ~~of~~ <sup>of</sup> ~~the~~ <sup>the</sup> ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup>  
 of ~~view~~ <sup>view</sup> ~~light~~ <sup>light</sup> ~~rested~~ <sup>rested</sup> ~~in~~ <sup>in</sup> ~~the~~ <sup>the</sup>  
~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup> ~~the~~ <sup>the</sup> ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup>  
 a ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup> ~~the~~ <sup>the</sup> ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup>  
 the ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup> ~~the~~ <sup>the</sup> ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup>  
 to ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup> ~~the~~ <sup>the</sup> ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup>  
~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup> ~~the~~ <sup>the</sup> ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup>  
 white of a ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup> ~~the~~ <sup>the</sup> ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup>  
~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup> ~~the~~ <sup>the</sup> ~~view~~ <sup>view</sup> ~~dropped~~ <sup>dropped</sup>

✓ X

Then came quickly from  
the stand hanging there  
flicking ~~the~~ light from  
the coast and an answering  
gleam shone forth from  
an Indian camp far  
high up in the midst of the  
huge blackness that now  
indicated the top of the mountain.  
When the sun came forth  
it was as though a new  
a night scene this mountain  
and never without a jostling  
of strange excitement as the  
flicker light swept over, and  
the sun came down along  
the side of the mountain.



\* The small rabbit is also called  
toe - ci - te - por - sen - go

Left the house in a  
hurry and arrived in a  
few minutes. The  
spirit seemed to push  
me in <sup>until</sup> all the  
furniture except that of the  
bureau and the  
wardrobe. I seemed to have  
gone.

Three o'clock for the  
Faded to arrange for my outfit for  
Friday so am delayed here another day.  
The weather is beautifully clear and  
the view of the mountains is very fine.  
I have finally found the name of the  
small rabbit Lepus sylvaticus. The Spanish  
name is to - por - sen - go and the  
Indian name is to - ci - te - por - sen - go \*

4  
Seeing a funeral procession  
going up the side of the Sacramento  
I followed. Arriving near the top  
through the cypress woods being  
with open hills & sea. Beautiful  
vistas were caught by the valleys  
& mountains until the summit  
was reached. There I found a  
chapel & the entire platform of the  
summit around that was a  
burial ground. Flat white & white  
above the ground surface &  
covered down to ~~some~~ rubble  
or broken shells of the ground & the  
inscriptions - each stone & slab  
the same, up & white of the same color.  
This is given the same of the same

who placed the table on which  
that the sons, daughters or  
husbands or other relatives as  
the case may be erected this  
table in memory of deceased  
Persons lying from the summit on the  
E. side of the high ground about  
a mile out on the plateau  
I look on to the N. side on which  
is the main chapel covering the  
cave of the saint to whom this  
hall is dedicated as the Sacra-  
ment of the Sacraments. There now was  
being said for the deceased, with  
a cross, band and ornaments  
~~The altar of the~~ The altar to the  
Chapel is raised three feet except



at the front via this side-salon  
as a long degree of road and probably  
a few more and some very  
accident. The side-salon, with a  
statement below, detailing the circum-  
stances of an accident & the state of  
the road. The side-salon is  
gratefully to the side-salon, of some  
sorts for his being from. I  
the person from harm & the  
danger. From this chapel, a road  
cobbles and road leads down  
to the plain at the foot of the  
hill. Beginning near the bottom  
and ending at the top, also to the  
chapel is the 14 stations of the  
cross, marked by pillars with a

monition to the fact to go.

At the time of the pilgrimages to the  
hill - to Feb. many persons,  
taper in hand, ascend this via  
dela croce <sup>on</sup> the <sup>knees</sup> over the  
~~the~~ rough pebble pavement, saying  
the prayers before each station.  
Along <sup>one</sup> the side of this way the roots  
& branches of bushes that hang on  
the eastern bank are hung with  
many bits of rag, fragments of  
rubbish, old straw hats and  
great number of small rag packets  
containing lock of women's hair from  
the entire head of hair in many instances.  
There are all sorts of small things  
which I saw of the lock of hair - these

Seen hanging from bushes near Indian  
villages on the Yukon in Alaska.  
On the chapel on the summit were  
<sup>pictures</sup> pictures of Santa Rosalia with a snake  
naked to the waist with one of the  
spiked chains <sup>like my grandfather's collar</sup> around her neck.  
Besides another, around the waist  
+ a chain sawing hanging over  
one shoulder, while long bloody  
scars along the back + drops of  
blood oozing from the back showed  
the extent of her suffering held up as an  
example to the faithful. On the door  
of the main chapel was a picture  
of a man suffering from 50 to 200 days  
of fasting. He depicted was  
out of the line of the Virgin. These  
things showed in Bishop's house, Nov. 14



Puebla & Mexico —

The hill of the *Secundante* is almost  
entirely *free* from *plum*, but *Quartz*  
& *Cypripedium* <sup>are</sup> common.

The hill is built up mainly of  
*Volcanic* <sup>and</sup> *trufa* some deposits of  
pumice near the top <sup>number</sup> *in* *no.*  
ranging from 2 to 6 in  
depth <sup>on the N. side</sup> *where* *in* *turn* *are* *buried*  
under a heavy layer of *trufa*  
of which I obtained a sample  
with some of the pumice —

H. M.

Popocatepetl - Jan 5 / 94  
Secured my outfit yesterday & today  
Gottman *rd* with 2 saddle horses, a  
pack horse & packer, with 3 Indian

hunters left for the mt. We  
made camp on the steep side of  
a small cañon at 11,000 ft. My  
hunters were out all day & secured one  
spec. of <sup>inver</sup> Lepus diazi, 1 Thomomys <sup>castellani</sup> &  
1 of the small bird they call Castellano  
here. The Junco pusillus, Pinelophila, <sup>and</sup> <sup>like</sup>  
common here, with an abundance of the  
tall oacca ton. This tall grass  
grows on northerly slopes in dense  
bunches 2 to 4 ft in diameter, & often  
from 6 to 8 ft high. These bunches  
grow so close together so that often  
only small patches of ground can  
be seen here & there. The oacca  
bunches are matted with the  
old oacca grass & under them

live Arvicolas, Sitomys, Oryzomys,  
Repus vancouverensis & L. Sigz.

The latter animal we found to be very  
common as its little arvicola-like run-  
ways under this mat of grass were found  
everywhere in a perfect network.

owing to their keeping so close under  
cover they are extremely difficult to shoot.  
We put out many snares to try &  
get some in that way.

At night closed down a cold wind came  
down the cañon & my hunters were kept  
busy about the fire all night to  
ward freezing - A severe frost  
coming - The surface of the ground  
now remains frozen all day on north  
slopes at this altitude.



Popocatepetl - Jan 6 / 94  
The snow yielded an example of  
le diage. While watching for these  
animal about night a taxidea came  
hopping out into an open spot by  
a house & was shot & was seen.  
Taking my horse I rode up the mt about  
twelve miles when I took a view of  
the mt. The smoke is very apparent  
when the air is rather calm now.  
From the base of the peak of Popo,  
I crossed the divide to the N. W. corner  
of the State. The intervening country  
ranges from 12200 ft. at its lowest  
part up to 13500 ft. at the base of the  
mt. It is in the form of a  
rolling plain draining to the N. W.

was covered with bunch grass  
with scattered trees along the  
sides of <sup>small</sup> cañons & sheltered hill slopes,  
but it is mainly open prairie  
a rolling prairie. The old high-  
way from Tlaxcala & Puebla crosses  
here. Getting near the S. end of Mts.  
it was evident that this range  
was once part of 3 large glaciers;  
one leading down toward the plains of  
Puebla where its drainage flowed, & two  
draining into the valley of Mexico.  
None of these were traced & no  
signs of moraine or drift were seen  
glaciers were a part of the system capping  
the mts. The two basins draining into  
the val. of M. are about a mile across

1000 ft deep & 3 to 4 m. long  
No signs of glacial work goes down  
about 1100 ft & usually not  
below 1150 ft. Having examined the  
country across to the border of Sgt.  
I returned to camp. The hunters were  
attempts to change to a place on the  
point of a hill under a large fir &  
consented so we moved over a few  
hundred yds & we had a very pleasant  
camp overlooking the valley & sheltered  
from the north winds. In looking about  
for Hyphantid several holes leading  
into the ground & evidently used by them  
were found but they usually make their  
forms under dense bunches of grass  
their color & the holes are not easily seen.



those of microlas living in the same localities.  
Have experiment a number of steel traps  
about in their runs.

During my trip today a number of birds were  
seen. On the plains bet. the mts. 12,000 to  
13,000 ft. I saw many <sup>lim. superciliosa</sup> salina mex & stercoraria  
meridiana. At 13,000 ft. several corvus &  
a spizella hawk; at 14,000 ft. a lark  
buryi. Among the trees from 9,500 to  
12,000 ft. I saw chrysomitris, pyrrhuloxia, hirundo  
ulmifrons, black head warbler, regulus calend.  
cooperi, robins, verdun aurant ery (&  
a few catam ocoid at 11,000 ft.) also  
red start small headed red starts. From  
9,000 to 11,500 finch sp. swallow common

In the eve, a Ring-necked Owl & several  
New. Sheppards were heard about our  
camp 11000 ft. *Pipilo macurus* & *Prognebris*  
were also seen at from 10000 to 11500 ft.

<sup>But to see</sup>  
Izaccihuatl gave us  
bring in traps in the morning it  
proved that it was a fortunate thing that  
they were set as 3 fine *L. longi* were  
caught during the night & in addition  
a *Neotoma mexicana* among them. Since  
to in the gopher traps set we secured  
a fine species of gopher, never taken  
by us before with a yellow spot  
under each eye. With the game  
brought in by us, much of our time  
is many of the small rabbits & some

for I am ready to leave here -  
The whole camp right after breakfast  
& nearly all day was occupied in  
crossing from our camp to the cave  
at base of Mt. just at timber line.  
It was over rock crossing the glacier  
passing with their sharp, high intercom-  
ing ridges & in many places it was  
too dangerous to ride. My Indian  
hunters insisted that it was impossible  
to cross between the peaks of this route.  
The Indian packer, I had along showed  
an amazing timidity on several of  
the steep long slopes & he kept  
talking about the horses falling down  
the hill when we stopped.



+

On the road I saw a Red-tailed  
hawk at 13000 ft near Dyt &  
mountain (Tiltast) near our  
about the same alt. near our  
camp on Dyt. at 13400 ft. I was  
quite surprised to have a covey of  
massena quail suddenly appear  
from behind my horse's feet,  
this road is to the upper bank  
line. In talking with my hunters,  
who are old sulphur gatherers, they  
told me that men used to work from  
15 to 30 days at a time in the craters  
& make from 3 to 5 a day according  
to the amount of sulphur gathered as  
they get 37 1/2¢ for each 25 lbs.

They said that they often became  
ill from the sulphur fumes.  
At night they slept in small  
cave like shelters at bottom of pit,  
and work was done in early a.m. &  
late in P.M. or during the middle of  
the day. The road they went through the rock  
was about walls & they were continually  
falling rocks on it too dangerous to  
do any work then. In the evening  
we saw one skulking at 13500 ft a single.  
Not much flying about but in numbers  
to capture it. Above camp at 11000 ft. on  
Papua a single bat was seen to fly  
out from a hollow at about dusk &  
it was evident that some of the animals  
winter in the water holes.

Is. 2000 ft. Jan. 8  
Between timberline & the lower border  
of the snow on the mt. the exposed edges  
of heavy beds of porphyry were  
rounded & smooth in many places  
so that in certain lights the smooth  
planes would reflect a certain polish  
sufficient to reflect the light &  
glacier faintly & thus is particularly  
noted when just at sunset.  
Rode up to the foot of cliff forming  
head of the whole mountain. Found  
there a dying glacier descending  
from the upper part of mountain  
& terminated in on one side by the  
dreadhead. The glacier, not too long  
& lateral moraines like the one



at middle of mt. These are now  
wholly outside the glacier, &  
are about 100 ft thick. Several  
hundred yards below the  
present nose of the ice - the nose  
of glacier is now forming a small  
terminal moraine approx. high ~~with~~  
(4 or 5) & this one is thrust up against  
a series of smaller <sup>water</sup> terraces which  
form a nose about 400 yds across  
& 15 ft. high <sup>& much higher on sides</sup> in middle with  
a wavy surface showing that  
they are a series of successive marks  
of the retreat of the glacier. Then comes  
a sloping one 100 yds across for

from moraines & then a dam-  
like moraine about 6 ft high  
in center & over 200 yds long  
but lower at ends

probably marking time when  
the glac. front was of this length  
& came over the now exp. cliff  
Back of this, near shortest end, is a  
series of many <sup>moraines</sup> 25 yds across  
& 20 ft high this is again suc-  
ceeded by a space or slope  
150 yds long to where the glac. fell  
over another cliff. Continuous  
with this last series in front  
of present nose of J. is a <sup>facies</sup> <sup>inal</sup> <sup>moraine</sup>  
35-40 yds long & 15-20 ft high  
succeeded by a long, low slope

125 yds long to cliff. The following outline will indicate the position of these moraines



just below the ~~large~~ long lat. moraines  
is a gently sloping bench about  
200 yds across on which are  
many huge blocks of drift  
boulders some 12 or 15 ft in diam.  
the surface of the table has its surface  
bed rock polished & rounded, I have  
only seen occasional grooving of  
rocks anywhere on the surface  
from foot of glacier. I descend  
on foot down the slopes of sand  
deposited south by the lower part  
of the ice below Central glacier (Bry-  
son). The number of cattails in  
growing along the hillside close  
to lower border of glacier is at



15000 ft. & the sandal tracks  
of the Indian horse, were seen  
here & there. Here there were not  
areas showed where fires had been  
put out to cause a new growth of  
pasturage. Sparrowhawks were  
seen & the tracks of the small  
rabbit which ranges up to the  
limit of vegetation were common.  
At 10 P.M. I <sup>joined</sup> my ascent &  
went to the upper border of fire  
where he had put out a large  
set of traps for gophers & we  
then descended to America.  
At 5 P.M. took the train for Mex.  
City.

The following eve (Jan 9<sup>th</sup>)  
I was surprised to have my assist.  
come up in the city with the report  
that the Mt. Indians on Sept. had stolen  
nearly all of his traps so that he had  
no means of continuing work & so  
came in -

City of Mex. - Jan 10  
Completed the work on  
hand here & packed up  
material ready for an  
early start.

Jan 11 - Orizaba -  
Started at 7 am for Orizaba  
which we reached at 5 PM.  
I was very ill all the way on

the train from a bilious  
attack.

Jan. 12 to 16<sup>th</sup> laid up  
in Orizaba with my attack of  
illness. On latter date I  
secured rooms in the house  
of Jacinto Hernandez & moved in there.  
On 17<sup>th</sup> being still ill I returned  
to City of Mexico for medical treat-  
ment. Remained there till  
the 23<sup>rd</sup> when I returned to  
Orizaba again & resumed work.  
On the way back ~~it was~~ I had  
a fine opportunity to study the  
lay of the country & learn the border  
of the table-land, just east of Esperanza.

It is evident that Mt Orizaba &  
the Sierra Negra once formed a  
great glacial centre with ice-  
streams extending down on the eastern  
slope to about 5000 ft. near the  
town of Maltrate. Since this date  
Dr. Henry See Sartorius tells me that there  
are glacial moraines at about 5000  
ft. above Huautla (co.) Below  
Mirador at about 2800 ft. I saw a  
considerable number of drift boulders  
of volcanic rock which had evidently been  
brought down there by ice from a considerably  
higher alt. but I saw no signs of glacial  
action & think they were brought down the  
slope by the action of water from the place  
where they were probably first deposited.



Immediately after starting down  
the slope toward Orizaba the country is  
changed from volcanic to limestone formation  
the general section has occupied a  
deep basin, ~~the~~ leaving high knife  
blade ridges between. In one place basin  
lies the town of Matamoros. Beginning  
on the east slope a short distance  
below the ridge extending down to the hills  
about Orizaba at an alt. of 4000 ft  
on the slope are the large leafed pines  
noted at Las Vigas. (At Las Vigas near  
Huasteca these pines reach volcanic  
limits at about 4000 ft.)

About the steep slopes leaving down  
the east slope of the hills the Mex.  
R.R. of the valley - the pines, and  
of the extent of the valley at a high

grade along sides & slopes that  
give beautiful views down into the  
deep valleys below. All north hill  
slopes are clothed with almost  
impenetrable thickets & growths  
of hollies, while the south slopes  
are grassy with scattered trees & bushes.  
The hills are too steep for cultivation  
until Orizaba is passed, but the  
valleys about Malinalco are used  
for corn, wheat, & other crops  
such as oranges &c. At about  
4500 ft. begin a few <sup>tobacco</sup> fields,  
& coffee fields but as the  
<sup>higher</sup> <sup>altitude</sup> <sup>the</sup> plants begin to die  
until one reaches nearly 5000 ft.  
in this vicinity.

Cool fogs are very common  
at Orizaba - sweeping up from  
the sea enveloping everything, often  
for days at a time, in a thick  
mist that sets everything dripping.  
When the weather is clear, the  
dews are extremely heavy, & the bushes  
& trees, & grass are glistening with  
moisture, in great trodled daps  
at sunrise it is well along  
in the forenoon before they  
are gone. Birds are remarkably scarce  
about this locality with much less  
variety of the tropical species than I  
expected to see. There is a section of  
barren hills about 20 miles  
west of Orizaba, the mountains are the

woods bordering the river we took  
a large new Sitomys. A few more  
of the common species were  
numerous & a few of smaller  
gray species were taken with  
some of the common Citellus,  
like those of the table-land appar-  
ently. A Geomys & 2 species of  
with Arvicola quasidorsalis, were also  
accused here on north hill tops &  
among dense thickets in damp places  
in the valley. The hills are all of  
stone about 6 or 8 ft. high with the strata  
titled up to a wide angle from the  
horizon. The soil is red sandstone  
except in the bottom of valleys  
which are deep rich brown loam.



Jalapa where the rocks & soil are all  
volcanic origin. The vegetation about Jalapa is  
far more luxuriant than near  
Copper Lake much better, there.  
The house where I have rooms here  
is owned by a man who has worked  
much for the Mexican R.R. Co's.  
He is somewhat liberalized in his ideas.  
At the same time he is bitterly opposed to the  
present government & accuses it of <sup>tyranny</sup> ~~tyranny~~  
the creation of an enormous debt. These are  
the common complaints of the opposition  
throughout the country & I am surprised  
to find even a considerable portion of the  
people with this feeling. I think it is not  
for the few but the present government  
is so thoroughly military & despotic  
that it is not surprising that all  
kind of abuses would be sure to  
have already taken place.

Thyke talks much of the Americans saying  
the Mexicans are too idle & careless  
to manage property. And says that he  
thinks that the Americans will gradually  
secure a large part of the mines & other  
valuable property of the country & that  
the eventual result will be annexation  
to the U.S. This same idea has been  
stated some by many other Mexicans.  
In many cases I presume it is done as a  
sort of flattery of my nationality but the idea is  
certainly a widespread one. At the same time  
there is a strong feeling hostile against  
Americans & the U.S. & the Mex. War.  
Two of the daughters of my host are school teachers  
one of them having informed me that the Ameri-  
cans could never have conquered the Mexicans  
in the war if Santa Anna had not sold the  
Mexican cause, & had the soldiers supply  
of powder replaced by dirt so that their  
guns were useless & so the invaders triumphed.  
In the few days we have been at this house  
it is rather amusing to see the naive  
frankness that the young ladies of the  
establishment exhibit. They tell us  
as being a part of the family of their  
lovers & the old folks - especially  
the mother - says that she has no use for the  
dissipated young fellows who hang  
about & make love to girls. She says she  
is willing that her daughters should have  
lovers who are men & capable of supporting  
them but that she does not wish to  
have them idle hanging about.



2 oldest  
The girls - they are very much interested in the  
new sentiment. They also tell  
with great amusement that it is  
a common thing when a girl has  
a lover & obnoxious to the parents for  
him to come to the woman to see  
her court. But if the father is heard  
approaching he takes to his heels.  
The father of these girls is of evident  
Indian extraction (also the mother)  
but they now speak pitifully of the  
ignorant Indians of the villages  
for committed as Mexicans.  
He is a wood dealer & an honest hard  
working man who with little or no  
education himself is anxious that his  
children should have education. As a matter  
two of his daughters are school teachers  
getting \$25 a month - which is considered to  
be good pay. The home life of these people is  
very simple. The daughters & cousins living with the  
family do the work each having a specified task  
to attend to. The table is set in an open corridor  
& as we pass out to our meals & salute the family  
each time we are asked with the usual polite  
formula if we will like something with  
them. The family sit on mats & rice at about 6 to 6.30.  
The daughters have very plain common calico house  
dresses which are exclusively worn at home & no  
effort is made to dress for the men so as to be neatly  
clad about the house. All effort of this kind is  
reserved exclusively for the street & this is apparently  
an almost universal custom. They are accustomed  
to powder & smooke a certain extent when they prepare  
to sit by the open window at the street & see &  
be seen, a la; but this is the same as going abroad.

While at Orizaba I looked up a resident collector named Toro who was said to have lived here many years & to know about the country. I found him to be a very ignorant fellow, with no energy & a surprisingly small amount of information.

Jan'y 30. Left Orizaba & went down to Fortín about 8 miles east to just hundred ft. lower. At this latter place the mts. already open out & a long slope with great hills extends down toward the hot country. Here coffee grows very well & some fine fields are seen. We were told that the ~~the~~ coffee bushes here have a life of about 15 years. The Hda. of this is a fine well kept place in charge of an American. The house has a handsome garden in front with fountains &c. This place is the point of departure for the natives of the coffee country & is reached here by pack mules.



January 31 - The morning was beautifully  
clear & a very fine view of the Peak, our  
rising nearly 15000 ft above us with  
its snow-capped summit rose behind by  
the first rays of the sun & its wooded  
base having a soft purple haze through  
ornaments but faded on the horizon. Below  
in the foreground were the  
coffee fields over shadowed by the broad  
banana plants. Traces of many  
subtropical game, a grouse in  
bills & patches among the fields  
& the clear, musical notes of *Hap-  
ochynus longirostris* & the "Whitethroat"  
bird arose clear & sweet from the  
masses of foliage all about.  
Hence then came the notes of the  
"Ruffed Grouse" & "Swinchrosts"  
black birds. After an uneventful, to the  
night on a hard bed at the side of a  
the station we were going, to start on  
our journey toward Misaki.  
At 9 a.m. we succeeded in  
getting away & spent the next  
day up to 2 P.M. in reaching

The village of San Juan de los Rios route  
lay nearly due north crossing the broad  
open slopes ascending down from  
the mts. with small cañons at  
intervals. About 7 miles out of Fortin  
we crossed a fine cañon  
full of pines & other vegetation.  
Here, about altitude 3500  
ft. we saw for the first time  
small tree pines from 6 to 10 ft. high,  
with the trunks 3 to 5 in. in diam.

Early in the afternoon we reached  
a small settlement called San Juan  
where we were forced to camp. The  
next day we made our way  
to Latacunga further.

R.T.H. Feb. 12. Early in the  
morning soon after sunrise I  
went out in the forest to  
the summit of Cerro de la Cruz  
a sharp peak rising above the  
hills. I saw some of the  
birds I had seen on the mt. & I  
saw a very fine view of the mt.  
Our lodgings were right in the

in a typical Mexican - a stable yard  
with rooms opening off it. Fortunately  
we were about the only guests so  
were comparatively comfortable with  
our own bedding. At noon we  
marched Huatusco and put up in  
another *fonda* where we were  
far from comfortable owing  
to the yard being filled with donkeys  
pack mules, etc. We found  
this place with the same attitude as  
Orizaba. It is situated farther from  
the great net & out on the general  
slope with grass surrounding hills  
& this seems to give it a somewhat  
warmer climate. Coffee does well  
in nearly all this district & about  
2,000,000 lbs. are raised a year  
from this section & the plantations  
are being enlarged. It is much  
cleaner than Orizaba.  
Three or four packs left us with a load  
of coffee to be taken to Mexico. I heard a man  
outfit to take us on to Mexico tomorrow.

Milvador, now owned by son  
Florentino Sartorius son of  
Dr. Carl Sartorius the original  
owner. Born 1837 in a  
poor hut Lower part of Hda.  
49-57 was in Europe in  
Polytechnic School <sup>???</sup> ~~Dresden~~  
Chem. Laboratory of Prof. Dr.  
Friedrich Wiewaden  
+ then in hands of Berlin  
Returned to Milvador &  
remained until 67 when  
this time he went to Wash.  
D.C., married, had 3 children  
Bet 1821-49 with her was  
purchased by Dr. Carl





